ONLY PAGES 1-8 OF LETTER COPIED AND ATTACHMENT 3

Lilly

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September 10, 2004

Mr. Donald A. Heller
Corrective Action Section, Waste Management Branch
US EPA Region 5
77 W. Jackson (DW-8J)
Chicago, IL 60604

Re: Corrective Measures Study Issues Response
Eli Lilly and Company
Tippecanoe Laboratories
IND 006 050 967

Dear Mr. Heller:

Eli Lilly and Company (Lilly) has prepared this letter to provide a response to issues identified in the Corrective Measures Study (CMS) Issues letter dated July 29, 2004 and follow-up telephone conversations with you and Mr. Dan Mazur regarding clarification of particular issues. Presented below is each issue raised in the July 29 letter (in italics), followed by Lilly's response.

Point of Compliance Wells

Issue 1: *Points of compliance are to be established for all areas of groundwater contamination. These must include the area of monitoring well T1842, and the contaminant plume which is migrating toward the Big Wea Creek, in addition to the edge of the Wabash River down slope of the main plant area.*

Response: Based on review of the dissolved-phase constituent plume, Lilly proposes to utilize the following monitor wells as "Point of Compliance Wells":

Big Wea Creek:	1854, 1855, and 1863
Wabash River:	Piezometer at 1842*, 1871, 1872, 1873, 1888, 1889, and 1890

The locations of the proposed Point of Compliance Wells are depicted in Attachment 1.

* Currently a piezometer (DP03) is located approximately 75 feet hydraulically down-gradient of monitor well 1842. As described in a subsequent section of this letter, this piezometer will be modified to allow for incorporation as a "Point of Compliance Well".

Point of Compliance Wells (Continued)

Issue 2: *Along the margin of the Wabash River below the main plant area, monitoring wells T1871, T1872, T1873, T1888, T1889, and T1890 may be acceptable as point of compliance wells for this area. However, because hydrogeological Unit III may discharge to the Wabash River, additional wells will be required in this unit, to supplement T1890.*

Response: Review of analytical laboratory results for groundwater samples collected from monitor well 1890 confirm that detected concentrations were either derived from laboratory contamination or that detected concentrations are below their respective US EPA Region 5 ESLs.

As the cross-section (Attachment 1) presented in our response to Issue 3 demonstrates, a clay aquitard measuring approximately 40 to 60 feet thick is located between the Unit I and Unit III groundwater bearing units beneath the Main Plant. To assess the effectiveness of this aquitard to limit the vertical migration of contaminants from Unit I into Unit III, groundwater samples have been historically collected from monitor well 1113, which is completed within Unit III in the Main Plant and monitor well 1890 completed within Unit III in the Flood Plain. Review of analytical laboratory results from wells 1113, and 1890 for Q1 2002 through Q4 2003 (a total of eight samples events), demonstrates the following:

Constituent	**Detection Rate**	**Comment**
Acetone	1 of 16	Detected in blanks at a higher concentration and detected concentration was below ESL
Benzene	1 of 16	Detected below ESL
Cholorobenzene	1 of 16	Detected below ESL
Chloroform	11 of 16	Consistent concentration detected in each sample, detected in blanks at a higher concentration, and detected concentrations were below ESL
Hexane	1 of 16	Detected in blanks at a higher concentration and detected concentrations were below ESL
Methylene Chloride	3 of 16	Detected in blanks at a higher concentration and detected concentrations were below ESL
o-Xylene	1 of 16	Detected below ESL
p-Chlorobenzorifluoride	4 of 16	Detected in blanks at a higher concentration and detected concentrations were below ESL

Point of Compliance Wells (Continued)

Constituent	Detection Rate	Comment
Tetrahydrofuran	3 of 16	Detected in blanks at a higher concentration and detected concentrations were below ESL
bis(2-ethylhexyl)phthalate.	14 of 16	Detected in blanks at a higher concentration

As this summary demonstrates, the clay aquitard has effectively retarded the vertical migration of contaminants from Unit I groundwater into the underlying Unit III groundwater, the majority of the detected concentrations are associated with laboratory contamination, and each of the detected concentrations (including the ones associated with laboratory contamination) are below their respective US EPA Region 5 Water ESLs.

Based on this evaluation, no additional monitor wells are required to supplement monitor well 1890.

Issue 3: *There must be a defensible rationale, with stratigraphic sections, for the selection of point of compliance monitoring wells.*

Response: Attachment 1 is a location map, which includes two cross-sections that demonstrate the lithology across the two areas of concern (Wabash River and Big Wea Creek). Presented below is the rationale for each area confirming that the proposed Point of Compliance monitor wells are appropriately placed.

Wabash River

Cross Section A-A' demonstrates that the proposed Point of Compliance Monitor Well DP03 is located in the shallow water bearing zone, hydraulically down-gradient of monitor well 1842, and would detect contaminants discharging from Unit I groundwater underlying the West Site prior to reaching the Wabash River.

Cross Section B-B' demonstrates that proposed Point of Compliance Monitor Wells are located adjacent to the Wabash River (1871, 1872,1873, 1888, 1889, and 1890), are located in the shallow (Unit IV) and deep water bearing zones (Unit III), and would detect contaminants discharging from Unit I groundwater underlying the Main Plant prior to reaching the Wabash River.

The proposed Point of Compliance Monitor Wells provide adequate coverage to ensure that dissolved-phase constituent concentrations in excess of Region 5 Water ESLs are not discharging to the Wabash River.

Big Wea Creek

Attachment 1, Cross Section B-B' demonstrates that proposed Point of Compliance Monitor Wells are located on the boundary of the Main Plant and the Southwest Properties. Two proposed Point of Compliance Monitor Wells (1854 and 1855) are completed in Unit I groundwater on the Main Plant and one proposed Point of Compliance Well (1863) is completed in Unit III groundwater in the Southwest Properties.

The proposed Point of Compliance Monitor Wells provide adequate coverage to ensure that dissolved-phase constituent concentrations are not migrating from Unit I groundwater underlying the Main Plant, discharging to Unit III groundwater underling the Southwest Properties, and discharging to Big Wea Creek.

End Point Criteria

Issue 1: *Any contaminated groundwater that is migrating beyond the Lilly property boundaries, or which in any way is beyond Lilly's control, must meet residential screening values for unrestricted use. For the contaminant plumes which are migrating toward sediments of Big Wea Creek and the Wabash River, adjacent groundwater must meet Region 5 RCRA Ecological Screening Levels (ESLs) for sediment.*

Note: This statement was further clarified by Mr. Dan Mazur to reflect that adjacent groundwater must meet US EPA Region 5 ESLs for water and not sediment.

Response: To allow for evaluation of Point of Compliance End Point Criteria, a tabular summary (Attachment 2) of groundwater analytical laboratory results (detected constituents only) was compiled for Q1, 2002 through Q4, 2003 for the proposed Point of Compliance wells, excluding the piezometer located hydraulically down-gradient of monitor well 1842. To allow for the screening of this analytical laboratory data, US EPA Region 5 Water ESLs (published on August 22, 2003) were used. Upon review of the published information, US EPA Region 5 Water ESLs had not been developed for the following constituents:

- Tetrahydrofuran;
- Hexane;
- Diethyl Ether;
- n,n-Diethylaniline; and
- p-Chlorobenzotrifluoride.

End Point Criteria (Continued)

US EPA Region 5 Water ESLs were developed according to the guidance document *Ecological Screening Levels for RCRA Appendix IX Hazardous Constituents, Working Draft* (U.S. EPA Region 5, 1999, hereafter referred to as the Region 5 Document). The methodology provided in the Region 5 Document consists of following a hierarchy of sources for obtaining or developing a Water ESL for a given constituent.

These sources include the following:

- Federal criteria;
- State criteria;
- GLWQI [Great Lakes Water Quality Initiative] Tier II criteria;
- Interim criteria (to be calculated according to Region 5/EPA guidance); and,
- Receptor-specific value.

For the five constituents identified above, Water ESLs were not provided in the federal criteria (U.S. EPA, *National Recommended Water Quality Criteria: 2002*, Nov. 2002), the state criteria (for each of the six Region 5 states: Wisconsin, Ohio, Minnesota, Michigan, Indiana and Illinois), or the GLWQI Tier II criteria. Therefore, interim criteria were developed for four of the five constituents according to the methodology provided in the Region 5 document, as discussed in the following sections. The fifth constituent, p-Chlorobenzotrifluoride, did not have adequate toxicity data for development of an interim criterion; therefore, an alternative Water ESL will be proposed for this constituent.

DEVELOPMENT OF WATER ESLS

Guidance for Development of Interim Criteria

Water ESLs were calculated for Diethyl Ether, Hexane, Tetrahydrofuran, and n,n-Diethylaniline according to the methodology provided in the Region 5 Document (p.14-15). This document was used in conjunction with US EPA's *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses* (U.S. EPA, Jan. 1985, hereafter referred to as the EPA Document). US EPA Region 5 guidance is a modification of the US EPA methodology.

End Point Criteria (Continued)

Data Collection and Selection

The first step in developing interim criteria was to obtain the appropriate aquatic toxicity data for each of the constituents. These data were obtained from US EPA's Aquatic Toxicity Information Retrieval database (AQUIRE), which is part of the agency's ECOTOXicology database (ECOTOX) (http://www.epa.gov/ecotox). ECOTOX is the standard database for aquatic and terrestrial toxicity data. Data were searched from both the plant and animal kingdoms, for aquatic habitat only, for all biological effects and for all publication years; each constituent was searched by its CAS number to obtain the most accurate search results, and no particular test species were specified in the search.

To obtain those data most relevant to a freshwater stream in Indiana, only data from freshwater tests were selected, as opposed to saltwater, and only data for species likely to be found in the geographic region were used. For example, carp and fathead minnow data were used, whereas Chinook salmon and sea lamprey data were not. An exception to this occurred in the case of n,n-Diethylaniline. The data obtained for this constituent was very small, with only three species and five total test results. One of the species was the *Oryzias latipes*, a Japanese ricefish which is a common test species. The data for this species were not included in the calculations for the other four constituents, but were included for n,n-Diethylaniline to make the database large enough to perform the necessary statistical calculations.

The limitations of the available databases allowed the use of only acute animal (vertebrate and invertebrate) toxicity results. Sufficient chronic toxicity results, which are preferred, were not provided for the subject chemicals; likewise, adequate plant toxicity studies were not located. Therefore, the interim criteria were calculated on the basis of an evaluation of acute toxicity studies (EC50 and LC50 endpoints) with the application of appropriate uncertainty factors, as allowed by US EPA Region 5 guidance.

Calculations

A Final Acute Value was calculated for each of the five constituents according to the procedures and equations described in Section IV of the US EPA Document (p.26-32). For n,n-Diethylaniline, because of its very restricted database, an exception to the US EPA procedures was made in order to perform the specified statistical calculations. The equations in Subsection O of Section IV (p.31) are based on using four different genera; for n,n-Diethylaniline, data for only three genera were available. To create a fourth genus for this chemical, two results for *Daphnia magna* were used separately instead of being pooled as normally required.

End Point Criteria (Continued)

Each Final Acute Value was extrapolated to a Final Chronic Value by dividing by an uncertainty factor of 50, as specified in the Region 5 Document. The databases and calculations for each chemical are provided in Attachment 3, Tables 1 through 4. The Final Chronic Values are the interim criteria proposed as the Water ESLs for these four constituents, as provided in Attachment 3, Table 5.

Development of Interim Criterion for p-Chlorobenzotrifluoride

No aquatic toxicity studies were located within AQUIRE for p-Chlorobenzotrifluoride (CAS number, 98-56-6). A Material Safety Data Sheet (MSDS) with aquatic toxicity data for a chemical with the trade name OXSOL®100, which is p-Chlorobenzotrifluoride, was located and utilized. A Water ESL for this constituent was developed on the basis of aquatic toxicity data provided in the referenced MSDS.

This MSDS provides aquatic data for fish, invertebrates, and plants. However, there were only two chronic studies provided; one study utilized fish and the other study utilized an invertebrate. These two studies were used for development of the Water ESL. The chronic toxicity study for fish was a 31-day study performed on the fathead minnow; the Maximum Acceptable Toxicant Concentration (MATC) result was a range of >0.54 to <1.4 mg/L. The chronic toxicity study for invertebrates was a 21-day study performed on *Daphnia magna*; the MATC result was a range of >0.03 to <0.05 mg/L. According to the *ECOTOX: ECOTOXicology Database System, Code List*, an MATC is the "hypothetical threshold concentration that is the geometric mean between the NOEC [No Observed Effect Concentration] and LOEC [Lowest Observed Effect Concentration] concentration" (U.S. EPA, Jan. 2004, p.23).

A value of 40 µg/L is proposed as the Water ESL for p-Chlorobenzotrifluoride, based on the mid-point of the results for the invertebrate study.

REFERENCES

ECOTOX: ECOTOXicology Database System, Code List. U.S. EPA, ORD and NHEERL's Mid-Continent Ecology Division. Jan. 2004. <http://www.epa.gov/ecotox/codelist.pdf>.

Makhteshim Agan North America group (MANA). MSDS for OXSOL®100. Issue date 19 July 2002. <http://www.islechem.com/pdfs/100msds.pdf>.

End Point Criteria (Continued)

The ECOTOX (ECOTOXicology) Database. U.S. Environmental Protection Agency (EPA), Office of Research and Development (ORD) and National Health and Environmental Effects Research Laboratory's (NHEERL's) Mid-Continent Ecology Division. 23 and 25 Aug. 2004. <http://www.epa.gov/ecotox>.

U.S. EPA, ORD. *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses.* EPA No. 822R85100 / NTIS No. PB85-227049. Jan. 1985.

U.S. EPA, Region 5. *Ecological Screening Levels for RCRA Appendix IX Hazardous Constituents, Working Draft.* 1999.

POINT OF COMPLIANCE WELLS EVALUATION

Big Wea Creek Point of Compliance Wells

Analytical laboratory results confirm no exceedance of US EPA Region 5 Water ESLs, with the exception of bis(2-ethylhexyl)Phthalate and n,n-Diethylaniline. Presented below is a summary for these two constituents:

bis(2-ethylhexyl)Phthalate

- The laboratory detection limit (1.4 ug/L) is above the US EPA Region 5 Water ESL (0.3 ug/L).
- A bis(2-ethylhexyl)Phthalate concentration was detected in 16 of the 24 groundwater samples.
- Each of the detected concentrations are associated with laboratory contamination exhibiting concentrations in excess of the detected sample concentration (with the exception of three samples).
- The three samples exhibiting concentrations above the associated laboratory contaminant concentration were just slightly above the laboratory contaminant concentration.

ATTACHMENT 3

US EPA REGION 5 WATER ESL TABLES

TABLE 1

Chemical: **Tetrahydrofuran**
CAS Number: 109999

Genus Species Common Name	Carassius auratus Goldfish	Cyprinus carpio	Daphnia magna Water flea	Daphnia pulex Water flea	Leuciscus idus melanotus Carp	Moina macrocopa Water flea	Pimephales promelas Fathead minnow
	Conc.(µg/L) Endpoint	Conc.(µg/L) Endpoint	Conc.(µg/L) Endpoint	Conc.(µg/L) Endpoint	Conc.(µg/L) Endpoint	Conc.(µg/L) Endpoint	Conc.(µg/L) Endpoint
Acute Study Values	2700000 LC50	5000000 LC50	5930000 EC50 > 10000000 LC50	10000000 LC50	2820000 LC50 2930000 LC50	11000000 LC50	1970000 LC50
Species Mean Acute Value (SMAV)	2700000	5000000	7700649.3	10000000	2874473.9	11000000	1970000
Genus Genus Mean Acute Value (GMAV)	Carassius 2700000	Cyprinus 5000000	Daphnia 8775334.366		Leuciscus idus 2874473.9	Moina 11000000	Pimephales 1970000

Chemical:	**Tetrahydrofuran**					
CAS Number:	109999					
Genus	Carassius	Cyprinus	Daphnia	Leuciscus idus	Moina	Pimephales
Genus Mean Acute Value (GMAV, ug/L)	2,700,000	5,000,000	8,775,334.3659	2,874,473.8649	11,000,000	1,970,000
Rank of GMAV (R)	2	4	5	3	6	1
Number of Genus (N)=6						
Cumulative Probability (P)= R/(N+1)	0.2857	0.5714	0.7143	0.4286	0.8571	0.1429

Chemical: **Tetrahydrofuran**
CAS Number: 109999

S2= $\sum((\ln GMAV)2) - ((\sum(\ln GMAV))2/4)$
$\sum(P) - ((\sum(\sqrt{P}))2/4)$

L= $(\sum(\ln GMAV) - S(\sum(\sqrt{P})))/4$

A= $S(\sqrt{0.05}) + L$

FAV= e^A

Rank	GMAV	lnGMAV	(lnGMAV)2	P= R(N+1)	√P
4	5,000,000	15.4249	237.9290	0.5714	0.7559
3	2,874,473.8649	14.8714	221.1579	0.4286	0.6547
2	2,700,000	14.8088	219.2994	0.2857	0.5345
1	1,970,000	14.4935	210.0628	0.1429	0.3780
SUM		59.5986	888.4492	1.4286	2.3231

S2= 5.6659

S= 2.3803

L= 13.5172

A= 14.0495

FAV= 1,263,635.7943

Final Chronic Value= 25,272.7159
(FAV divided by an uncertainty factor of 50)

* All concentrations are in ug/L

TABLE 2

Chemical: **Hexane**
CAS Number: 110543

Genus Species Common Name	Daphnia magna Water flea	Leuciscus idus melanotus Carp	Brachionus calyciflorus Rotifer	Branchiura sowerbyi Oligochaete	Chironomidae Midge family	Cyclops viridis Cyclopoid copepod	Melanoides tuberculata Snail	Pimephales promelas Fathead minnow	Plankton Plankton
	Conc.(µg/L) Endpoint	Conc.(µg/L) Endpoint	Conc.(µg/L) Endpoint	Conc.(µg/L) Endpoint	Conc.(µg/L) Endpoint	Conc.(µg/L) Endpoint	Conc.(µg/L) Endpoint	Conc.(µg/L) Endpoint	Conc.(µg/L) Endpoint
Acute Study Values	> 1000000 EC50 2585.4 EC50 > 50000 LC50	210000 LC50 4480000 LC50	48000 LC50 57900 LC50 68300 LC50	3286500 LC50	570000 LC50	602500 LC50	1350000 LC50	2100 LC50	120.2 EC50
Species Mean Acute Value (SMAV)	50562.971	969948.45	57470.746	3286500	570000	602500	1350000	2100	120.2
Genus Genus Mean Acute Value (GMAV)	Daphnia 50562.971	Leuciscus idus 969948.45	Brachionus 57470.746	Branchiura 3286500	Chironomidae 570000	Cyclops 602500	Melanoides 1350000	Pimephales 2100	Plankton 120.2

Chemical:	**Hexane**								
CAS Number:	110543								
Genus	Daphnia	Leuciscus idus	Brachionus	Branchiura	Chironomidae	Cyclops	Melanoides	Pimephales	Plankton
Genus Mean Acute Value (GMAV, ug/L)	50,562.9708	969,948.4522	57,470.7461	3,286,500	570,000	602,500	1,350,000	2,100	120.2
Rank of GMAV (R)	3	7	4	9	5	6	8	2	1
Number of Genus (N)=9									
Cumulative Probability (P)= R/(N+1)	0.3	0.7	0.4	0.9	0.5	0.6	0.8	0.2	0.1

Chemical: **Hexane**
CAS Number: 110543

S2= $\sum((\ln GMAV)2) - ((\sum(\ln GMAV))2/4)$
$\sum(P) - ((\sum(\sqrt{P}))2/4)$

L= $(\sum(\ln GMAV) - S(\sum(\sqrt{P})))/4$

A= $S(\sqrt{0.05}) + L$

FAV= e^A

Rank	GMAV	lnGMAV	(lnGMAV)2	P= R(N+1)	√P
4	57,470.7461	10.9590	120.1004	0.4	0.6325
3	50,562.9708	10.8310	117.3100	0.3	0.5477
2	2,100	7.6497	58.5178	0.2	0.4472
1	120.2	4.7892	22.9360	0.1	0.3162
SUM		34.2289	318.8642	1.0000	1.9436

S2= 467.0354

S= 21.6110

L= -1.9437

A= 2.8887

FAV= 17.9698

Final Chronic Value= 0.3594
(FAV divided by an uncertainty factor of 50)

* All concentrations are in ug/L

TABLE 3

Chemical: **Diethyl Ether**
CAS Number: 60297

Genus	Daphnia		Leuciscus idus		Carassius		Lepomis		Pimephales	
Species	magna		melanotus		auratus		macrochirus		promelas	
Common Name	Water flea		Carp		Goldfish		Bluegill		Fathead minnow	
	Conc.(µg/L)	Endpoint	Conc.(µg/L)	Endpoint	Conc.(µg/L)	Endpoint	Conc.(µg/L)	Endpoint	Conc.(µg/L)	Endpoint
Acute Study Values	165000	EC50	2840000	LC50	2560000	EC50	> 10000000	LC50	2560000	LC50
					2540000	EC50				
					2160000	EC50				
					1850000	EC50				
Species Mean Acute Value (SMAV)	165000		2840000		2257744.486		10000000		2560000	
Genus	Daphnia		Leuciscus idus		Carassius		Lepomis		Pimephales	
Genus Mean Acute Value (GMAV)	165000		2840000		2257744.486		10000000		2560000	

Chemical:	**Diethyl Ether**				
CAS Number:	60297				
Genus	Daphnia	Leuciscus idus	Carassius	Lepomis	Pimephales
Genus Mean Acute Value (GMAV, ug/L)	165,000	2,840,000	2,257,744.4864	10,000,000	2,560,000
Rank of GMAV (R)	1	4	2	5	3
Number of Genus (N)=5					
Cumulative Probability (P)= R/(N+1)	0.1667	0.6667	0.3333	0.8333	0.5000

Chemical: **Diethyl Ether**
CAS Number: 60297

S2= $\sum((\ln GMAV)2) - ((\sum(\ln GMAV))2/4)$
$\sum(P) - ((\sum(\sqrt{P}))2/4)$

L= $(\sum(\ln GMAV) - S(\sum(\sqrt{P})))/4$

A= $S(\sqrt{0.05}) + L$

FAV= e^A

Rank	GMAV	lnGMAV	(lnGMAV)2	P= R(N+1)	√P
4	2,840,000.0000	14.8593	220.7992	0.6667	0.8165
3	2,560,000.0000	14.7555	217.7253	0.5000	0.7071
2	2,257,744.4864	14.6299	214.0333	0.3333	0.5774
1	165,000.0000	12.0137	144.3290	0.1667	0.4082
SUM		56.2584	796.8868	1.6667	2.5092

S2= 60.8212

S= 7.7988

L= 9.1724

A= 10.9163

FAV= 55,065.4791

Final Chronic Value= 1,101.3096
(FAV divided by an uncertainty factor of 50)

* All concentrations are in ug/L

PREFERRED NAME N,N-DIETHYL-ANILINE

TABLE 4

Chemical: **n,n - Diethylaniline**
CAS Number: 91667

Genus Species Common Name	Daphnia magna Water flea		Daphnia magna Water flea		Pimephales promelas Fathead minnow		Oryzias latipes Medaka, high-eyes	
	Conc.(µg/L)	Endpoint	Conc.(µg/L)	Endpoint	Conc.(µg/L)	Endpoint	Conc.(µg/L)	Endpoint
Acute Study Values	250	EC50	1000	EC50	16400	LC50	40000 25000	LC50 LC50
Species Mean Acute Value (SMAV)	250		1000		16400		31622.7766	
Genus Genus Mean Acute Value (GMAV)	Daphnia 250		Daphnia 1000		Pimephales 16400		Oryzias 31622.7766	

Chemical:	**n,n - Diethylaniline**			
CAS Number:	91667			
Genus	Daphnia	Daphnia	Pimephales	Oryzias
Genus Mean Acute Value (GMAV, ug/L)	250	1,000	16,400	31622.7766
Rank of GMAV (R)	1	2	3	4
Number of Genus (N)=4				
Cumulative Probability (P)= R/(N+1)	0.2	0.4	0.6	0.8

Chemical: **n,n - Diethylaniline**
CAS Number: 91667

S2= $\sum((\ln GMAV)2) - ((\sum(\ln GMAV))2/4)$
$\sum(P) - ((\sum(\sqrt{P}))2/4)$

L= $(\sum(\ln GMAV) - S(\sum(\sqrt{P})))/4$

A= $S(\sqrt{0.05}) + L$

FAV= e^A

Rank	GMAV	lnGMAV	(lnGMAV)2	P= R(N+1)	√P
4	31,622.7766	10.3616	107.3634	0.8000	0.8944
3	16,400	9.7050	94.1877	0.6000	0.7746
2	1,000	6.9078	47.7171	0.4000	0.6325
1	250	5.5215	30.4865	0.2000	0.4472
SUM		32.4959	279.7548	2.0000	2.7487

S2= 141.7549

S= 11.9061

L= -0.0576

A= 2.6047

FAV= 13.5273

Final Chronic Value= 0.2705
(FAV divided by an uncertainty factor of 50)

* All concentrations are in ug/L

TABLE 5
Proposed Ecological Screening Levels (ESLs)

Chemical:	**Tetrahydrofuran**	**Hexane**	**Diethyl Ether**	**n,n - Diethylaniline**	**p-Chlorobenzotrifluoride[2]**
Final Acute Value (FAV, ug/L)	1,263,635.7943	17.9698	55,065.4791	13.5273	
Final Chronic Value (ug/L)[1]	25,272.7159	0.3594	1,101.3096	0.2705	40

Notes:
1. Final Chronic Value is the FAV divided by an uncertainty factor of 50.
2. Derived by adoption of aquatic MATC provided in MSDS.